Assignment 7

"Radiological Effects and Countermeasures, Biological and Chemical Agents, Textbook Assignment: and CBR Defense, " pages 8-12 through 10-10.

Learning Objective: (Cent'd) Explain the uses and operating characteristic of radiological detection devices.

IN ANSWERING QUESTIONS 7-1 THROUGH 7-3, SELECT FROM COLUMN B THE FUNCTION OF THE RADIAC MONITORING INSTRUMENT IN COLUMN A. NOT EVERY RESPONSE IN COLUMN B IS USED.

- A. Radiac Monitoring B. Functions Instruments
- 7-1. AN/PDR-56
- 7-2. AN/PDR-43
- 7-3. AN/PDR-27
- 1. Detects low intensity gamma and beta radiation
- 2. Measures the intensity of alpha particles
- 3. Measures intensity of gamma radiation from DT-60/PD
- 4. Detects high intensity gamma radiation
- The AN/PDR-65 detects which of the following types of radiation?
 - 1. Alpha
 - 2. Beta
 - Gamma 3.
 - Neutron

- 7-5. Which of the following radiation detectors is nonportable?
 - 1. AN/PDR-27 2. AN/PDR-43

 - 3. AN/PDR-65
 - IM-/PD
- 7-6. What is the minimum to maximum usuable dose range of the DT60/PD?
 - 1. 3 R to 150 R

 - 2. 5 R to 300 R 3. 7 R to 450 R 4. 10 R to 600 R
- 7-7. Which of the following personnel dosimeters is NOT self-reading?

 - 1. IM-9/PD 2. IM-143/PD
 - 3. DT-60/PD
 - 4. IM-107/PD
- 7-8. If ship's power fails, the AN/PDR-65 can operate on batteries for about what period of time?

 - 1. 20 hr 2. 30 hr 3. 50 hr
 - 4. 75 hr
- 7-9. The radiac computer-indicator CP-95A/PD must be used to read the total amount of gamma radiation absorbed by a DT-60/PD.
 - 1. True
 - 2. False
- 7-10. What is the minimum to maximum detectable dose range of the IM-9/PD dosimeter?
 - 0 to 200 mR
 - 2. 0 to 600 mR
 - 10 to 200 mR 3.
 - 10 to 600 mR

- 7-11. Which of the following radiac instruments 7-17. To protect a gamma radiation detector is placed on or near the bridge as a fixed radiological device?
 - 1. AN/PDR-272
 - 2. AN/PDR-65
 - 3. AN/PDR-43 4. AN/PDR-56
- 7-12. Radiac instruments are capable of detecting and measuring alpha, beta, gamma, and neutron radiation simultaneously.
 - 1. True
 - 2. False
- 7-13. What dosimeter keeps a permanent record of radiation exposure?
 - 1. AN/PDR-65

 - 2. IM-9/PD 3. DT-60/PD
 - 4. PP-4276A/PD
- Shore-based radiac equipment should be checked for operational readiness how often?
 - 1. Weekly
 - 2. Monthly
 - 3. Biweekĺv
 - 4. Annually
- 7-15. You are onboard ship and suspect an AN/PDR-43 is malfunctioning. Which of the following actions should you take?
 - 1. Change the batteries only
 - 2. Place an out-of-calibration label on
 - 3. Change the batteries and if the malfunction persists, send it to a shore-based repair activity
 - 4. Let the ship board electricians repair
- What type of radiation detector requires 7-16. the greatest care in handling?
 - 1. Alpha
 - 2. Beta
 - 3. Gamma
 - 4. Neutron

Learning Objective: Recognize the purposes of radiological monitoring, and surveying equipment, and various monitoring techniques.

- from becoming-contaminated during use, you should take which of the following precautions?

 - Wear gloves
 Throughly wash the radiac after each use
 - 3. Use high-pressure air to decontaminate the radiac after each reading
 - Cover the instrument with a plastic bag
- 7-18. What radiacs can be protected from contamination by a layer of thin plastic film such as "Mylar"?
 - 1. Alpha
 - 2. Beta
 - 3. Gamma
 - 4. All of the above
- 7-19. If a monitoring team uses a minimum number of monitoring points that will give a good sample of the condition of vital stations, they should be able to complete the survey in about how much time?
 - 5 min
 - 10 min 2.
 - 3. 15 min
 - 20 min
- 7-20. A shipboard or shipyard monitoring team consists of how many personnel?
 - 1. 7
 - 2. 2 3. 10

 - 4.
- 7-21. what is the designed accuracy reading of radiac instruments?
 - 1. ±10 percent 2. ±10 rads

 - 3. ±20 rads
 - 4. ±20 percent
- 7-22. For each reading taken during a detailed monitoring survey, what maximum time is generally allowed for the meter to reach maximum deflection?
 - 1. 3 to 4 sec

 - 2. 4 to 5 sec 3. 6 to 8 sec
 - 4. 8 to 10 sec

- 7-23. When fallout is imminent, readings of open-bridge or gamma intensity should be recorded at LEAST how often?

 - 1. Every 2 to 3 min 2. Every 5 to 10 min
 - 3. Every 15 to 20 min
 - 4. Every 30 to 40 min
- A ship's rapid exterior gamma radiation survey is NOT conducted for which of the following reasons?
 - 1. To evaluate the radiological situation at exposed action stations
 - To locate deck areas in need of decontamination
 - 3. To test the effectiveness of personnel decontamination stations
 - 4. To determine the effectiveness of a decontamination pass
- 7-25. Dosimeters located at monitoring points in deep shelter and at vital topside and below-deck spaces are used to determine the total exposure of what type of initial, transit, and deposited radiations?
 - 1. Alpha
 - 2. Beta
 - Gamma
 - 4. Neutron
- On a small ship going through overhaul, monitoring points should be how far apart?
 - 6 ft 1
 - 12 ft
 - 25 ft 3.
 - 50 ft
- 7-27. You are monitoring the spread of air-radiation. The air sampler $\,$ should be placed at what height?
 - 1. At deck level
 - 2. About waist level
 - 3. Approximately 5 feet about t4. In the compartment overhead Approximately 5 feet about the deck
- After an area has been decontaminated and monitored, who should post the intensity level and safe stay time in the area?
 - The commanding officer
 - 2. The damage control officer
 - 3. The monitoring team
 - 4. The operations officer

Learning Objective: Describe the types of biological warfare (BW) and chemical warfare (CW) agents.

- 7-29. Detailed information on biological warfare (BW) and chemical warfare (CW) agents can be found in what chapter of the Naval Ships' Technical Manual?
 - 340
 - 2. 3220
 - 3. 470
 - 4. 2840
- 7-30. BW and CW agents are different in which of the following ways?

 - Their effect on the human body The medical treatment required The speed of action
 - 3.
 - 4. All of the above

Learning Objective: Explain conditions that affect the movement of BW and CW agents throughout a ship on convoy.

- 7-31. BW and CW agents are most effective in which of the following weather conditions?
 - Light rain
 - 2. Dusty winds
 - Light winds 3.
 - 4. Snow
- 7-32. BW and CW agents are most effective in which of the following atmospheric conditions?
 - A temperature inversion
 - 2. A cold air mass
 - 3. An increasing gradient
 - A decreasing gradient
- 7-33. What is the average rate of change in ventilation of a apace where little heat is generated?
 - 3 min
 - 2. 10 min
 - 20 min 3.
 - 4. 30 min
- 7-34. When a ship is in a contaminated zone, which of the following number of air changes is meet favorable?
 - One
 - 2. Six
 - 3. Three
 - Eight

- 7-35. Your ship has just left a contaminated zone. You should go to maximum ventilation of spaces for about how many air changes?
 - 1. 2 to 4
 - 2. 4 t o 6
 - 3. 6 to 12
 - 4. 12 to 20
- 7-36. If ventilation rates must be increased at some time during the 24 hour day, what is the safest period from the BW point of view?
 - 1. Late afternoon to after sunrise
 - 2. Midmorning to midafternoon
 - 3. Morning to an hour or two after sunrise
 - Late afternoon, dusk, darkness, and for an hour or two after sunrise

Learning Objective: Identify the different types and uses of biological warfare agents.

- 7-37. What micro-organism causes typhus?
 - 1. Protozoa
 - 2. Fungi
 - 3. Rickettsiae
 - 4. Virus
- 7-38. What micro-organism generally causes the LEAST severe disease?
 - 1. Fungi
 - 2. Bacteria
 - 3. Virus
 - 4. Protozoa
- 7-39. BW agents may be used for which of the following strategic or tactical goals?
 - 1. Brief illness
 - 2. Crippling disease
 - 3. Widespread death
 - 4. All of the above
- 7-40. The identification of SW agents is generally a responsibility of which of the following personnel?
 - 1. Damage controlmen
 - 2. Medical personnel
 - 3. BW specialists
 - 4. Damage control officers

Learning Objective: Identify the characteristics end effects of chemical warefare agents.

- 7-41. Chemical agents are NOT designed to produce which of the following effects?
 - 1. Disorganization of body functions
 - 2. Burning of materials
 - 3. Corrosion of materials
 - 4. Diseases
 - A. NERVE AGENTS
 - B. BLISTER AGENTS
 - c. BLOOD AGENTS
 - D. CHOKING AGENTS
 - E. VOMITING AGENTS
 - F. TEAR AGENTS
 - G. INCAPACITING AGENTS
 - H. TOXINS
 - I. INCENDIARIES

FIGURE 7-A

IN ANSWERING QUESTIONS 7-42 THROUGH 7-50, REFER TO FIGURE 7-A.

- 7-42. Nitrogen mustard HN2 is an example of which CW agent?
 - 1. A
 - 2. B
 - 3. C
 - 4. D
- 7-43. Clorine is an example of which CW agent?
 - 1. B
 - 2. D 3. F
 - 4. 0
- 7-44. Hydrogen cyanide is an example of which CW agent?
 - 1. C
 - 2. E
 - 3. H
 - 4. I
- 7-45. Which CW agent affect the eyes and upper respiratory tract?
 - 1. D
 - 2. F
 - 3. G
 - 4. H

Which detector uses sensitized paper to 7-46. Which CW agent works by disturbing the 7-51. check for liquid nerve agents G AND V and chemical processes of the nervous system blister agents H and L? and stopping bodily functions? 1. A 1. A 2. B 2. C 3. D 3. C 4. E 4. D Which CW agent allows a victim that does 7-52. Which detector uses sensitized paper that not die quickly to recover within a few turns yellow when exposed to a GB nerve hours? agent? 1. B 1. A 2. C 2. C 3. D 3. D 4. H 4. F Which detector is used to check for 7-48. Phosgene (CG) and diphosgene (DP) are 7-53. concentrations of toxic CW agents in the examples of which CW agents? air and on surfaces? 1. A 2. C 1. C 3. D 2. D 4. H 3. E 4. F 7-49. Strict sanitary measures and medical inspection of drugs and food is the best Which detector may be used to check for 7-54. way to protect against which CW agents? chemical agents in vapor or liquid form? 1. A 1. A 2. C 2. B 3. G 3. C 4. H 4. F Which CW agents are designed to wage war 7-55. Which detector uses infrared sensing to identify a CW attack? without massive killing? 1. B 1. B 2. D 2. D 3. G 3. E 4. H 7-56. Which detector is used for automatic continuous sampling of the outside air and warns of CW agents by actuating the Learning Objective: Describe the equipment end materials used to detect CW ship's alarm system? agents. 1. C 2. D 3. E 4. F A. M-8 PAPER В. M-9 PAPER

FIGURE 7-B

M256 KIT D. M18A2 KIT

C.

E. CWDD F.

CAPDS

IN ANSWERING QUESTIONS 7-51 THROUGH 7-56, REFER TO THE CW DETECTORS IN FIGURE 7-B.

Learning Objective: Recognize the purposes of the CBR defense system,

event of an attack.

equipment used, and countermeasures taken to protect shipboard personnel in the

- of the following shipboard watch guarter and station bill(s)?
 - The recue and assistance bill
 - The collision bill (only)
 - 2. The collision bill (only)
 3. The abandom ship bill (only)
 - 4. Both 2 and 3 above
- 7-58. The chemical, biological and radiological bill is the responsibility of which of the following personnel?
 - 1. The type commander
 - 2. The commanding officer
 - 3. The engineering officer
 - 4. The damage control officer
- 7-59. The M-258-Al decontamination kit is used for which of the following CBR exposures?

 - Liquid nerve or blister agents
 Nerve gas and phosphorus burns
 - 3. Blood agents or radiation burns
 - 4. Biological and radiological contamination
- 7-60. You used an M258A1 decon kit at 1030 and you experience some upper chest sweating at approximately 1100. You should take which of the following medications?
 - 1. Aspirin
 - 2. A shot of atropine
 - 3. A 2-pam-chloride injection
 - 4. Both 2 and 3 above
- 7-61. You may administer what maximum number of atropine injections to yourself without medical personnel supervision?
 - 1. One
 - 2. Two
 - 3. Three
 - 4. Four
- Which of the following agents requires qualified medical attention immediately?
 - 1. Blood agents

 - Nerve agents
 Blister agents
 - 4. Choking agents
- 7-63. Each contamination control area should be supplied with how many M258A1 decon kits?
 - 1. Fifteen
 - 2. Twenty
 - 3. Thirty 4. Forty

- The general emergency bill replaces which 7-64. what NSTM chapter gives detailed information for mission oriented protective posture (MOPP) procedures?
 - 410
 - 470
 - 3. 521
 - 4. 570
 - 7-65. Before removing your protective gas mask. You should always take which of the following precautions?
 - 1. Loosen lower straps only
 - Wash the exterior of the mask
 Test for sufficient oxygen

 - 4. Test for harmful gases
 - 7-66. What is the original shelf life of the CBR protective suit?

 - 2. 2 yr
 - 3. 7 yr
 - 4. 4 yr
 - 7-67. After you break the seal on a CBR protective suit packet, how long can an uncontaminated suit be stored and remain effective?
 - 5 days
 - 2. 14 days
 - 3. 20 days
 - 4. 31 days
 - 7-68. How long do CBR protective suits provide continuous protection within a chemical contaminated environment?
 - 1 hr
 - 6 hr 2.
 - 12 hr 3.
 - 24 hr
 - 7-69. What is the objective of radiological decontamination?
 - 1. To neutralize the contamination
 - To destroy the contamination
 To control the location of
 - contamination
 - 4. To identify the type of contamination
 - 7-70. What chemical compound is generally used aboard ships to decontaminate biological agents?
 - 1. Calcium carbonite

 - Formaldehyde
 Calcium hypochlorite
 - 4. Citric acid

- 7-71. After a chemical attack, which of the following methods of decontamination is commonly used?
 - Natural weathering Heat

 - 2. 3. 4. Physical removal Chemical action

- Which of the following chemical agents should NEVER be decontaminated by the heat or water wash down methods? 7-72.
 - Lewisite
 - Blister agents Nerve agents G-agents
 - 2. 3. 4.

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